

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/IL2004/001018

**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC 7 C12N5/06 C07K14/715 A61K35/00

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**Minimum documentation searched (classification system followed by classification symbols)  
 IPC 7 C12N C07K A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, PAJ, WPI Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>SAWADA S ET AL: "DISTURBED CD4+ T CELL      HOMEOSTASIS AND IN VITRO HIV-1      SUSCEPTIBILITY IN TRANSGENIC MICE      EXPRESSING T CELL LINE-TROPIC HIV-1      RECEPTORS"      JOURNAL OF EXPERIMENTAL MEDICINE, TOKYO,      JP,      vol. 187, no. 9, 4 May 1998 (1998-05-04),      pages 1439-1449, XP000866065      ISSN: 0022-1007      figure 6</p> <p>-----</p> <p style="text-align: center;">-/-</p>	17-25, 37

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

## \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the International filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*8\* document member of the same patent family

Date of the actual completion of the international search

15 April 2005

Date of mailing of the international search report

04/05/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
 NL - 2280 HV Rijswijk  
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl.  
 Fax: (+31-70) 340-3016

Authorized officer

Nichogianopoulou, A

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/IL2004/001018

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	LOUACHE FAWZIA ET AL: "Expression of CD4 by human hematopoietic progenitors" BLOOD, vol. 84, no. 10, 1994, pages 3344-3355, XP002324832 ISSN: 0006-4971 abstract	17-25, 37
P, X	KAHN JOY ET AL: "Overexpression of CXCR4 on human CD34+ progenitors increases their proliferation, migration, and NOD/SCID repopulation" BLOOD, vol. 103, no. 8, 15 April 2004 (2004-04-15), pages 2942-2949, XP002324814 ISSN: 0006-4971 the whole document	1-40
A	KOLLET ORIT ET AL: "Human CD34+CXCR4-sorted cells harbor intracellular CXCR4, which can be functionally expressed and provide NOD/SCID repopulation" BLOOD, vol. 100, no. 8, 15 October 2002 (2002-10-15), pages 2778-2786, XP002324815 ISSN: 0006-4971 the whole document	1
A	LAPIDOT T ET AL: "The essential roles of the chemokine SDF-1 and its receptor CXCR4 in human stem cell homing and repopulation of transplanted immune-deficient NOD/SCID and NOD/SCID/B2mnull mice" LEUKEMIA (BASINGSTOKE), vol. 16, no. 10, October 2002 (2002-10), pages 1992-2003, XP002324816 ISSN: 0887-6924 page 1998, right-hand column, line 1 - page 1999, left-hand column, line 31	1

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/IL2004/001018

### Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:  
**Although claims 7, 29-36 and 39 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.**
2.  Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  
**see FURTHER INFORMATION sheet PCT/ISA/210**
3.  Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

#### Remark on Protest

The additional search fees were accompanied by the applicant's protest.  
 No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.1

Although claims 7, 29-36 and 39 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

-----

Continuation of Box II.2

Present claims 1-40 relate to stem cells in general, whereas the application provides support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT for only human hematopoietic stem cells (HSCs). In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Consequently, the search has been carried out for those parts of the claims which appear to be clear, supported and disclosed, namely those parts relating to the effect of CXCR4 overexpression on human HSCs.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.